IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

NCR Docket No. 8806

Application of:

Vincent, Parry G.   Group Art Unit: 3623

Serial No. 09/750,948   Examiner: Meinecke Diaz, Susanna M.

Filed: December 28, 2000

For: SYSTEM AND METHOD FOR SUGGESTING INTERACTION STRATEGIES
        TO A CUSTOMER SERVICE REPRESENTATIVE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF TRANSMITTAL LETTER

Sir:

Transmitted herewith for filing is an Appeal Brief and two copies thereof to the
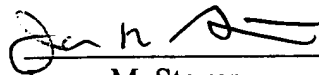
Final Rejection dated November 22, 2004.

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Respectfully submitted,

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By: _____

Name: JAMES M. STOVER

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Dayton, Ohio

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BRIEF ON APPEAL

Sir:

This is an appeal under 37 CFR 1.191 to the Board of Patent Appeals and
Interferences of the United States Patent and Trademark Office from the final
rejection of claims 1 and 4 through 20 of the above-identified patent application.
The claims were finally rejected in an Office Action dated November 22, 2004.
Three copies of the brief are filed herewith, together with the requisite fee under
37 CFR 1.17(f).

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(1) REAL PARTY IN INTEREST

The present application is assigned to NCR Corporation.

(2) RELATED APPEALS AND INTERFERENCES

There are currently no known active appeals or interferences related to the present application.

(3) STATUS OF CLAIMS

Claims 1 and 4 through 20 are pending in the application.

Claims 1 and 4 through 20 are all rejected and are being appealed. Such claims are shown in the Appendix attached to this Appeal Brief

(4) STATUS OF AMENDMENTS

A response to the Final Rejection has not been filed.

(5) SUMMARY OF INVENTION

Referring to Figure 1, an example embodiment of a customer relationship management system 10 is provided within which the present invention may be utilized. The system 10 is designed to enable a business to record, analyze and respond to customer interactions and behaviors in a personalized manner, in order to establish long-term relationships with its customers. As shown in Figure 1, customer data is input to the system from a number of different interaction data sources. These data sources include, but are not limited to, advertisements 12, virtual interactions such as the businesses' web site(s) 14, or e-mail 22, call centers 16, in-store visits 18, and direct mailings 20. The interaction data from these sources is captured through one or more interaction channels or business systems, including front office applications, transaction handling systems, point-of-sale

systems, Internet commerce applications and Computer Telephony Integration (CTI) software systems. Once captured, the data is stored by the business in a data store or interaction repository 24.

After customer data is captured through one or more of the interaction channels, data mining or analysis tools 26, such as, for example, those incorporated in NCR's Relationship Optimizer' marketing automation solution. are applied to the data in the interaction repository 24 to determine patterns of interaction behavior. Preferably, one or more customer models 28 are derived by a business or marketing analyst for use by the data analysis tools 26 in determining marketing segments and predicting customer behaviors. Using the models and algorithms, the data analysis tools 26 may determine, among other attributes, product affinities, namely, the relationship of a product or product line to another product, concept or customer attribute, and customer product ownership profiles.

System 10 also includes a customer personalization management application, such as application 30 depicted in Figure 1, to provide call center representatives with. personalized information about each customer. An example of a suitable customer personalization management application for the present invention is NCR Corporation's InterRelate+ customer interaction solution, which utilizes the customer information captured through a number of different channels to provide call center representatives with real-time access to customer segmentation data and personalized assistance with customer interactions. In the preferred embodiment, the customer information and assistance from the personalization management solution is utilized in a call center environment to provide personalized data and suggested interaction approaches to a call center agent.

As shown in Figure 1, the customer personalization management application 30 includes a CPM server 32 for transferring data between a

recommendation engine 50 and individual customer service representative workstations 34. The CPM server 32 receives the analyzed customer data from the recommendation engine 50 for use in personalizing the representatives' customer contacts. In addition, data gathered from the representative's customer interactions is summarized and uploaded to the interaction repository 24, as indicated by reference numeral 35, for use in refining the business's internal data store. The CPM server 32 is preferably connected to a CPM database 36, which functions as a central data store for configuration data, as will be described in more detail below. In addition to the CPM database 36, the CPM server 32 also interfaces with an Interaction Director 38, which executes on each workstation 34 and provides personalized screens on each workstation which correspond to the current customer contact.

The CPM server 32 also preferably interfaces with a configuration tool, such as the Builder Service 40 shown in Figure 1, which functions as a primary configuration point for the application 30. Through the configuration tool, marketing personnel are able to configure the Interaction Director 38 to provide personalized presentations for each contacted customer based upon that customer's demographics or marketing segments, and also create personalized sales pitches or scripts for use by the customer service representative. The personalized presentations and scripts are stored as configuration data in the CPM database 36. During a customer interaction, the particular sales presentation and/or scripts to be utilized by the representative will be determined in real-time, based upon the customer information obtained from the recommendation engine 50.

System 10 includes a recommendation engine 50 for comparing data from current customer interactions with the previously detected behavior patterns and purchasing history identified by the analysis tools 26. The recommendation engine 50 interfaces with the analysis tools 26 and the customer personalization

application 30, to suggest interaction strategies through the application based upon the previously detected customer patterns and purchase history. Recommendation engine 50 may be any suitable type of commercially available recommendation or rules engine, such as that developed and marketed by Net Perceptions, Inc. In the present invention, the recommendation engine 50 is "primed" with the results of the data analysis of the interaction repository 24, in order to recognize and act upon patterns in customer interactions. In order to recognize, patterns of behavior in on-going interactions, the recommendation engine 50 generates a set of "rules" based upon the patterns determined by the data analysis. These rules may correspond to general behavior patterns, or may be particularized for each customer. When interaction notes are entered through the workstation panel 46, the recommendation engine 50 compares the notes in real-time with the previously developed rules. When a particular interaction or customer request follows one of the rules, a strategy is suggested which corresponds to the rule.

As stated above, one embodiment of the present invention is implemented using a customer personalization management application 30, such as NCR Corporation's InterRelate+™ customer relationship management software; a commercially available recommendation or rules engine 50, such as that provided by Net Perceptions, Inc.; and various data analysis tools 26, such as those incorporated in NCR's Relationship Optimizer' marketing automation solution. Of course, other customer relationship management solutions, rules engines, data analysis techniques and operating systems (now known or hereinafter developed) may also be readily employed in the present invention without departing from the scope of the invention.

(6) ISSUES

Whether claims 1 and 4 through 20 were properly rejected under 35 U.S.C. §102(b) as being anticipated by the NCR Customer Relationship Management suite/portfolio, including Relationship Optimizer™ and InterRelate™ products.

(7) GROUPING OF CLAIMS

Claims 1 and 4 through 20 stand and fall together.

(8) ARGUMENT

The rejection of claims 1 and 4 through 20 under 35 U.S.C. §102(b) as being anticipated by the NCR Customer Relationship Management suite/portfolio, including Relationship Optimizer™ and InterRelate™ products is respectfully traversed.

35 U.S.C. §102(b) Rejection of System Claims 11 through 15

Each one of system claims 11 through 15 of the present application recites an invention which is a combination of several elements. For example, claim 11 recites an invention that includes one or more data analysis tools, and a recommendation engine. Claim 12, which depends from claim 11, further recites an interaction management application. The specification of the present application provides examples of these three elements: the recited data analysis tools may be provided by NCR Corporation's Relationship Optimizer product; the recited recommendation engine may be a commercially available recommendation or rules engine provided by Net Perceptions, Inc.; and the recited interaction management application may be provided by NCR Corporation's InterRelate product.

As stated above, each one of system claims 11 through 15 of the present application recites an invention which is a combination of several elements. A prior sale or public use of one or more individual elements of a claim cannot be an anticipation of a combination of elements – the combination itself must be shown to be in public use, on sale, or publicly disclosed more than one year prior to the effective filing date of the present application. Neither one of NCR Corporation's Customer Relationship Management suite/portfolio, Relationship Optimizer™ or InterRelate™ products, cited in the 35 U.S.C. §102(b) rejection of claims 11 through 15, includes all the elements recited in any one of claims 11 through 15. None of these products includes, and none of the cited product announcements discloses: (1) a recommendation engine as recited in each one of claims 11 through 15, (2) a recommendation engine in combination with one or more data analysis tools as recited in claims 11 through 15, or (3) a recommendation engine in combination with one or more data analysis tools and an interaction management application as recited in claims 12 through 14.
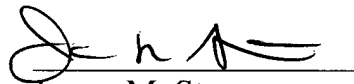
35 U.S.C. §102(b) Rejection of Method Claims 1, 4-10, and 16-20

The elements described above and recited in claim 11, i.e., one or more data analysis tools, and a recommendation engine, are also elements that are recited each one of method claims 1, 4-10 and 16-20. None of products referenced in the cited product announcements includes, and none of the cited product announcements discloses: (1) the use of a recommendation engine, or (2) the use of a recommendation engine in combination with one or more data analysis tools. As neither of the cited product announcements discloses a product that performs all of the steps recited in method claims 1, 4-10 and 16-20, each one of these claims is believed to be patentable over the cited references. None of the cited

product announcements discloses, a recommendation engine which performs the function recited in each one of method claims 1, 4-10 and 16-20.

Review of the present application and claims with consideration of the foregoing comments, and reconsideration of the rejection of claims 1 and 4 through 20, are respectfully requested.

Respectfully submitted,

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(9) APPENDIX

1. (previously presented) A method of suggesting an interaction strategy to a customer service representative in a customer relationship management environment, said method comprising the steps of:

maintaining an interaction repository containing customer data;

utilizing one or more data analysis tools comprising executable instructions to analyze said customer data to determine one or more patterns and generate a set of rules based upon said patterns; and

using a recommendation engine to apply said rules to a current customer interaction to recognize one or more of said patterns in said interaction and suggest an interaction strategy corresponding to said recognized patterns.

2. (canceled)

3. (canceled)

4. (previously presented) The method of claim 1, wherein said recommendation engine recognizes said patterns from said current customer interaction in real-time.

5. (original) The method of claim 1, wherein said customer data includes a customer interaction history with said business.

6. (original) The method of claim 1, wherein said patterns are individually determined for customers of said business.

7. (original) The method of claim 1, further comprising the step of capturing said customer data from a plurality of different interaction data sources.

8. (original) The method of claim 7, wherein said interaction channels are both virtual and physical.

9. (original) The method of claim 1, wherein said current customer interaction is a telephone contact with a call center representative.

10. (original) The method of claim 1, wherein said current customer interaction is through a self-service application.

11. (original) A system for recommending a strategy for managing a customer interaction, said system comprising:

a plurality of interaction channels for capturing customer data;

one or more data analysis tools comprising executable instructions for analyzing said customer data from said plurality of channels and determining one or more patterns from said data; and

a recommendation engine for analyzing a current customer interaction and recognizing one or more of said patterns in said interaction, said recommendation engine recommending strategies corresponding to said recognized patterns.

12. (original) The system of claim 11, further comprising an interaction management application for directing said customer interaction, said application including a user interface for inputting data regarding said current interaction.

13. (original) The system of claim 12, wherein said user interface includes a first display panel for inputting notes regarding said interaction and a second display panel for displaying recommended strategies from said recommendation engine.

14. (original) The system of claim 13, wherein said recommendation engine uses said interaction notes to determine said recommended strategies.

15. (original) The system of claim 11, further comprising a configuration tool for developing scripts corresponding to said recommended strategies.

16. (previously presented) A method of suggesting an interaction strategy to a customer service representative in an automated customer relationship management environment, said method comprising the steps of:

storing customer data from a plurality of different interaction sources in an interaction repository;

utilizing one or more data analysis tools comprising executable instructions to analyze said said customer data to determine one or more patterns; and

using a recommendation engine to detect affinities between a current customer interaction and said patterns and recommend an interaction strategy based on any detected affinities.

17. (original) The method of claim 16, wherein said recommendation engine detects said affinities and recommends said interaction strategies in real-time.

18. (original) The method of claim 17, wherein said recommendation uses a context of the current customer interaction to detect affinities to said patterns.

19. (original) The method of claim 17, further comprising the step of inputting information from the current customer interaction and using said input information to detect affinities to said patterns.

20. (original) The method of claim 16, wherein said patterns include customer product ownership, customer interaction history, customer interaction behavior, and product affinities.